



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,566	10/10/2006	Nicolas Frechin	2006_0412A	9264
513	7590	06/25/2008		
WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021			EXAMINER	
			BELLAMY, TAMIKO D	
			ART UNIT	PAPER NUMBER
			2856	
			MAIL DATE	DELIVERY MODE
			06/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,566	<b>Applicant(s)</b> FRECHIN ET AL.
	<b>Examiner</b> TAMIKO D. BELLAMY	<b>Art Unit</b> 2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 04 April 2006.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-4 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-4 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 04 April 2006 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/DS/02)  
     Paper No(s)/Mail Date 4/4/06
- 4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

**DETAILED ACTION*****Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. In claim 4, the claimed invention is directed to non-statutory subject matter. The claim discloses numerical data recorded on a storage medium for implementation by a computer. The numerical data are not “directed to one of the Statutory Classes”.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (2,938,117).

Re claim 1, as depicted in fig. 6, Schmidt discloses establishing at an identical depth, a plurality of hydrocarbon ratios (Col. 7, lines 1-75; Col. 8, lines 1-75). Schmidt discloses forming at least one straight line, and each straight line having a given inclination (Col. 8, lines 15-21; 62-68). Schmidt discloses gas composition analysis (col. 2, lines 13-29). While Schmidt does not specifically disclose selecting from a plurality of ratios, **a sub-group of reference ratios** in order to constitute a signature which is representative of a hydrocarbon composition, Schmidt discloses the invention is not limited to **methane** as a

common standard in the ratios of the hydrocarbon gas , as other ratios, such as ethane, or other values, or combination ratios, may serve as well ( Col. 9, lines 5-9). The use of a common standard in the ratios of the hydrocarbon gas is equivalent to a reference ratio. Therefore, to employ Schmidt on a sub-group of reference ratio would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches plurality or standard/reference ratios (e.g., methane/pentanes, methane/butanes, etc See fig. 6).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 2-4 rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt (2,938,117).

Re claim 2, as depicted in fig. 6, Schmidt discloses displaying a plurality of ratios (e.g., methane/Pentanes, Methane/butanes, etc). Schmidt specifically states that the values of hydrocarbon ratios are plotted against production gas-liquid **hydrocarbon ratios (Col. 7, lines 21-24)**. Therefore, the graphs (plurality of straight lines in fig. 6) represent a first hydrocarbon (e.g., hydrocarbon ratios) in accordance with a second hydrocarbon (e.g., production gas-liquid hydrocarbon ratios). Schmidt discloses a means for storing (e.g., recorder 32) the contents and

Art Unit: 2856

a calculating means calculating a plurality of hydrocarbon content ratios (e.g., methane/pentanes, methane/butanes, etc See fig. 6).

Re claim 3, Schmidt discloses geological strata (e.g., strata) (Col. 7, lines 21-42).

Re claim 4, as depicted in figs. 1 and 6, Schmidt discloses a numerical data structure (2-6) recorded on a storage medium (e.g., recorder 32) (Col. 8, lines 10-20) for implementation by a computer (Col. 4, lines 34-45).

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMIKO D. BELLAMY whose telephone number is (571)272-2190. The examiner can normally be reached on Monday - Friday 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tamiko Bellamy  
/TB/  
June 18, 2008  
/Hezron Williams/  
Supervisory Patent Examiner, Art Unit 2856